

NOTEWORTHY COLLECTIONS

CALIFORNIA

GELIDIUM VAGUM Okamura (Gelidiaceae).—Marin Co., Tomales Bay, Marshall. 122°53'W, 38°10'N in lower intertidal, on small boulders exposed to slight wave activity, associated with *Gigartina exasperata*, 24 March 1995, J. Hughey (NCC, UC); Tomales Bay, Marshall. 17 April 1995, J. Hughey and R. Stabler (NCC, UC).

Previous knowledge. Native to the Huanghai Sea, Yellow Sea, Korea Strait, Sea of Japan, and Pacific coasts of Honshu and southern Hokkaido, Japan (D.E. Renfrew et al., CAN. J. BOT. 67: 3295-3314, 1989). It was collected for the first time from the eastern Pacific in 1986 at Hornby and Denman islands in the Strait of Georgia, British Columbia with gametophytes and tetrasporophytes being found in August, September, October, and sterile plants in April (Renfrew et al., 1989).

Significance. New for California. Juvenile plants appeared in February and tetrasporophytes in March and April. Gametophytes were abundant in April. Oyster spat was considered to be the source of introduction to British Columbia (Renfrew et al., 1989). Recently, *G. vagum* has been collected from Orcas Island and Bellingham Bay, Washington where oyster farms are also known to occur (T. Mumford, personal communication). Since the Marshall area is surrounded by oyster farms that have obtained spat and young oysters from Washington (J.T. Hollibaugh, personal communication) and since the species appeared suddenly and became abundant rapidly, it is likely that oysters or oyster spat imported from the Strait of Georgia are implicated in this introduction. The identification was verified by Prof. T. Yoshida (Univ. of Sapporo).

DAYS BINGHAMIAE A.J.K. Millar (Dasyaceae).—Marin Co., Tomales Bay, Marshall Beach. 122°55'W, 38°10'N, MLLW to -1.0 ft., on cobblestones with *Gastroclonium compressum* (see Madroño 42: 409, 1995) and *Ceramium californicum*, 21 April 1995 and 4 June 1995, J. Hughey (NCC, UC).

Previous knowledge. Listed in the Marine Algae of California as *Pogonophorella californica* (J. Ag.) P. Silva. Last collected at its northern limit near the Estero de San Antonio (3 km south of the Marin/Sonoma county line) in 1912, this alga has not been recorded north of Monterey since.

Significance. Growing profusely on cobblestones in sandy mud on a sheltered shore on the west side of Tomales Bay. Readily identified in mid April (stipitate, 2.5 cm tall, monosiphonous laterals), by June it formed dense patches that broke the water surface at low tide. Elsewhere, *D. binghamiae* grows in association with *Phyllospadix scouleri* on rocks in sandy areas exposed to high wave energy. A specimen of this alga, identified as *Dasya sinicola* var. *sinicola*, which was collected in June, 1983 by L. Remy is housed in NCC.

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GALENIA PUBESCENS. (Eckl. & Zeyh.) Druce var. *PUBESCENS* (AIZOACEAE).—Los Angeles Co.: Santa Monica Mountains, Topanga State Park near the Los Angeles City Boundary, on the W edge of the Santa Ynez Fire Road, near 34°04'18"N, 118°34'36"W, USGS Topanga 7.5' Quad., elev. ca. 1314-1325 ft [401-404 m], patch

15 or 20 feet long and about 6 or 8 feet wide, growing under a *Quercus agrifolia* and out into the sun, much smaller patches growing along the road to the south of the main patch for several hundred feet, 17 May 1995, *M. Stassforth 383* (RSA, LA), verif. by T. S. Ross.

Previous knowledge. A couple of years ago, this taxon was reported as new to the North American flora based on two collections at a disturbed site on Signal Hill, vicinity of Long Beach, Los Angeles County, where it occurred as a locally abundant weed (T. S. Ross, *Madroño* 41:226–228, 1994).

Significance. This represents documentation of this taxon as established at a second location in Southern California. The new site is ca. 50 km to the NW of Signal Hill. From the description of this occurrence it would appear to have been introduced intentionally for slope stabilization, but we do not yet know who is promoting use of this weed in Southern California. Certainly the introduction of such weeds into areas of natural vegetation needs to be vehemently discouraged.

[Margaret Stassforth, the collector of this new record, acknowledges the assistance of David S. Hollombe, who brought the original *Galenia* note to her attention.]

As an addendum to the original report (Ross, 1994), it is perhaps worth noting here some of the distinguishing characters between this taxon and *Galenia secunda* (L.f.) Sond. in Harvey. Both taxa are weeds in Australia, and the latter species has been reported from Florida. If *G. pubescens* is actually being used as a slope stabilizer in California, then there is some probability that *G. secunda* may eventually be found here as well. Both are very similar in growth habit and morphology, and examination of Australian collections indicates that misidentifications are not uncommon. The following key should assist in differentiating the two species, and has been modified from A. Prescott's fine treatment (*Galenia*, pp. 50, 52 in A. S. George [ed.], *Flora of Australia*, Vol. 4, 1984):

- Leaves and stems gray-green; trichome-like scales sparse, narrowly-rhomboid, whitish and ± opaque, closely appressed, ca. 0.3–0.8 mm long; perianth segments white to pinkish on adaxial surface; anthers often pink to ± salmon *G. pubescens*
- Leaves and stems gray-white; trichome-like scales dense, narrowly-rhomboid, whitish or yellowish, the longest often subulate and ± vitreous, loosely appressed, 1–2 mm long; perianth segments white to cream-yellow on adaxial surface; anthers yellow *G. secunda*

The characters offered here are generally subtle, and may be more difficult to grasp in the absence of good comparative material. The grayish white appearance of the herbage in *G. secunda* may be compared to that of *Lotus argophyllus* (A. Gray) Greene ssp. *argophyllus* as compared to another *Lotus* in which the green of the herbage is more pronounced through the sparser pubescence. Anther color, subtle a trait as it may seem, provides a useful ancillary character in fresh material, but may also be retained in some pressed and dried collections. The specimens of *Galenia pubescens* collected in California thus far have had salmon-pink anthers.

LASIOSPERMUM BIPINNATUM (Thunb.) Druce [*L. radiatum* Trev.; *Lidbeckia b.* Thunb.] (ASTERACEAE).—Santa Barbara Co.: Goleta, dune area adjacent to the Devereaux School, apparent relic of experimental plantings by F. E. Clements, persisting after nearly 30 years, 30 April 1958, *H. M. Pollard s.n.* (RSA); Los Angeles Co., northern Claremont, just S of the intersection of Mills Avenue × Mt. Baldy Road in disturbed but undeveloped area with sandy alluvial soil largely dominated by alluvial scrub elements such as *Artemisia californica* and *Lepidospartum squamatum*, herbaceous perennial, scattered locally amid the scrub, obviously naturalized locally, USGS Mt. Baldy 7.5' Quad., T1N R8W, NW/4 NW/4 SW/4 SW/4 SE/4 section 27; elev. ca. 1630–1640 feet [497–500 m], 26 May 1992, *T. S. Ross, S. Boyd, S. Carlquist 6427* (RSA, CAS, CDA, US), det. by Celia Kutcher, 1995.

Previous knowledge. This taxon is not currently cited for North America by John Kartesz (A synonymized checklist of the vascular flora of the United States, Canada, and Greenland, Vol. 1, 2nd Ed., Timber Press, Portland, Oregon, 1994) and, to the best of our knowledge, has not been previously recorded in any Californian flora.

Significance. This appears to be the first formal report of this species in North America. While the first cited collection appears to have been from a locally naturalized population persisting at the site of introduction, the second was from a locally naturalized, self-disseminating occurrence. The plant from which the *Ross et al.* material was collected formed a clump ca. 50 cm broad with blow-sand accumulated around its base. Several scattered plants were noted throughout the vicinity and, although the local plants were still flowering, achenes from mature capitula were readily disarticulating and being blown about by the wind. In this herbaceous perennial species, the stem bases tend to be decumbent with adventitious roots; the showy capitula bear white rays and yellow disk florets (which may have a slight greenish cast); phyllaries are in few series (the inner one prominent); the receptacle is chaffy; and the achene is epappose, distinctively densely lanate and cocoon-like, enclosing the elliptic-turbinate brown seed. The generic name is appropriately descriptive of these achenes, and the specific epithet refers to the glabrous, bipinnatifid leaves.

This taxon is not listed in *Hortus Third* (L. H. & E. Z. Bailey, Macmillan Publishing Co., New York, 1976), or the *Sunset Western Garden Book* (Sunset Publishing Corp., Menlo Park, Calif., 1995), and is not known to be in general cultivation in California. According to Celia Kutcher, Curator and Taxonomist with the Fullerton Arboretum (personal communication), the arboretum acquired seeds from South Africa via an *Index Seminum* exchange list and offered some of the resulting plants to the public before discovering its weedy tendencies on the arboretum grounds. It is not known whether this taxon has been recently available to the Californian public through any other source. This South African species is native from the Transvaal S through the Orange Free State and Lesotho into the eastern Cape Province (A. J. Guillard, *Flora of Lesotho* [Basutoland], J. Cramer, Lehre, Germany, 1971). Various South African floristic references allude to the fact that this species is weedy and well adapted to disturbances, and some floras of adjacent areas record the taxon as adventive along roadsides. In a discussion of lowland plant ecology in Lesotho, Guillard (1971) indicates that plants (in general) around villages "are subject to severe trampling and constant grazing by the many animals which the villagers possess, so that only hardy grasses such as *Cynodon dactylon* survive there and many weed species (*Lasiospermum bipinnatum*, *Datura* species, *Chenopodium* species and tough woody types of *Helichrysum*, as well as others) are found most often." The *Lasiospermum* clearly has the attributes of a successful weed, and should be watched for in mild climate areas of the Pacific states.

STYLOCLINE MASONII Morefield (ASTERACEAE).—Los Angeles Co.: Soledad Canyon Wash (easterly extension of the Santa Clara River wash system), broad sandy wash 2600 ft ESE of Acton, USGS Acton 7.5' Quad., T5N R13W, SE/4 SE/4 section 36, elev. 2720 ft [829 m], associated with *Artemisia tridentata* ssp. *parishii*, *Ephedra nevadensis*, *Penstemon centranthifolius* [erroneously indicated on label as *P. spectabilis*], *Rumex hymenosepalus*, and numerous annuals such as *Stylocline psilocarphoides*, *Nemophila menziesii*, *Cryptantha micrantha*, *Phacelia fremontii*, *Claytonia exigua*, *C. parviflora*, *Pectocarya penicillata*, *Eriophyllum pringlei* and *E. wallacei*, 30 April 1991, T. S. Ross, S. Boyd, & L. Arnseth 4965a (RSA), det. by J. D. Morefield.

Previous knowledge. This diminutive annual species was originally described by J. D. Morefield in 1992 (Madroño 39:117) on the basis of 7 collections which spanned 1935–1971. Four of these collections were from Kern Co., two from San Luis Obispo Co., and one from Monterey Co. Morefield (1992) indicated that "visits to most of the known sites in 1989 revealed no plants (perhaps because of poor rains) but

showed ample evidence of development or disturbance." As a result of the species' apparent rarity, the California Native Plant Society added the taxon to its list 1B with a R-E-D Code of 3-3-3 (M. W. Skinner & B. M. Pavlik [eds.], CNPS Inventory of Rare and Endangered Vascular Plants of California, CNPS, Sacramento, 1994).

Significance. This apparently represents the only collection of this rare taxon since 1971 and extends the known range of the species to Los Angeles Co., an extension of roughly 130 km SSE from the nearest collection site in Kern Co. At present, this is the only locality where the taxon is known to be extant. Morefield, in describing *S. masonii* (1992), thought it to be most closely related to *S. psilocarphoides* M. Peck and contrasted it with that species, noting also the allopatric distribution patterns—the former in the cismontane and the latter almost exclusively transmontane. The collection cited here is the first locality where the two species have been documented together, and is near the SW margin of the Mojave Desert (interior drainage) at the head of the Santa Clara River (its coastal effluence in Ventura Co.). With the poorly known distribution of *S. masonii* now significantly broadened, it should be sought in the intervening regions as well as adjacent areas of similar habitat.

CORONILLA VALENTINA L. (FABACEAE).—Los Angeles Co.: Santa Catalina Island, 1 mi S of Avalon on rocky ridge, suffrutescent perennial, 2 ft tall [61 cm], flowers yellow, few, in shade, sandy soil at bottom of small canyon, elev. 100 ft [30.5 m], 10 April 1963, E. R. Blakley 5607 (SBBG); Los Angeles Co.: Whittier Hills (Puente Hills, *pro parte*), Skyline Drive at the head of Turnbull Canyon, [USGS Whittier 7.5' Quad.,] T2S R11W, center of sect. 14, elev. 1140 ft [347.6 m], shrubs to ca. 11 dm tall naturalizing at roadside, several young plants seen, 9 March 1991, T. S. Ross 4204 (RSA); Los Angeles Co.: Rancho Palos Verdes, Abalone Cove area, old road from Palos Verdes Drive South to Abalone Cove (now just a trail), NNW of Portuguese Point and ± SSE of the Wayfarers Chapel, USGS Redondo Beach 7.5' Quad. [near 33°44'33"N 118°22'32"W]; elev. ca. 120 ft [36.6 m], shrubs to ca. 7.5 dm tall, apparently introduced and naturalizing locally, 28 March 1992, T. S. Ross & A. Brinkmann-Busí 6057a [fls] b [frs] (RSA).

Previous knowledge. The first collection cited above was reported for Santa Catalina Island by G. D. Wallace (Vascular plants of the Channel Islands of Southern California and Guadalupe Island, Baja California, Mexico, Nat. Hist. Mus. of Los Angeles Co., Contrib. in Sci. No. 365, 1985), and has been listed for North America by Kartesz (1994). It has not, however, been listed for California in The Jepson Manual (J. C. Hickman [ed.], 1993, Univ. Calif. Press, Berkeley).

Significance. Each of the populations documented above appears to be introduced by human agency, but at least the latter two are reported by the collector as naturalizing locally outside of cultivation. While the taxon appears to lack the aggressively invasive habit of some confamilial Mediterranean shrubs (e.g., *Spartium junceum* L., *Genista linifolia* L., *G. monspessulana* (L.) L. Johnson), it should be watched for in other low elevation regions of California under maritime influence. The first collection cited apparently represents subspecies *valentina* (det. by S. Junak); the latter two collections represent subsp. *glauca* (L.) Batt. in Batt. & Trab. (det. by T. S. Ross). The species is native to the Mediterranean region and southern Portugal.

GERANIUM ROTUNDFOLIUM L. (GERANIACEAE).—Los Angeles Co.: Angeles [National] Forest, [San Gabriel Mtns.,] Trail Canyon, 14 May 1934, L. E. Hoffman s.n. (RSA); Los Angeles Co.: San Gabriel Mtns., Angeles National Forest, Trail Canyon, Big Cienega, elev. 3750 ft [1143 m], in dry semi-shady loose humus-rich loam in open shade of *Quercus chrysolepis*, trailing with herbage viscid glandular, 30 July 1967, L. C. Wheeler s.n. (RSA), both det. by T. S. Ross.

Previous knowledge. This annual species was originally reported for California by M. H. Grayum & D. L. Koutnik in 1982 (New records of vascular plants from the

Santa Monica Mountains, California, and adjacent parts of Los Angeles and Ventura counties, Aliso 10:313-320) based on a collection in the Santa Monica Range (Los Angeles Co.: abundant and well established along the lower reaches of Temescal Canyon, *Gordon et al.* 990 [SFV]).

Significance. The two specimens cited from the San Gabriel Mountains indicate that this annual species was naturalized in Trail Canyon for at least 33 years and very likely still occurs there. The taxon is listed for North America by Kartesz (1994) but is not listed for California in *The Jepson Manual* (M. S. Taylor in J. C. Hickman [ed.], 1993). The SFV herbarium is currently in a state of transition and the holdings are unavailable for study, hence we have not been able to confirm the identity of the *Gordon et al.* collection; however, the two RSA collections are currently considered correctly identified, having been previously identified as *G. molle* L. and *G. bicknellii* Britton var. *longipes* (S. Watson) Fern., respectively. It is clear that the species is not merely a "waif" in California and ultimately ought to be cited in a "complete" flora for the state. Reportedly native to most of Europe except the most northerly regions.

SCROPHULARIA PEREGRINA L. (SCROPHULARIACEAE).—Los Angeles Co.: Claremont, Rancho Santa Ana Botanic Garden, established weed throughout the garden, 2 April 1987, *A. Liston 646-1* (RSA); Los Angeles Co.: Claremont, RSABG, SE side of Indian Hill Mesa on a vernal moist clay embankment, elev. ca. 1320 ft [402 m], a common winter and spring weed in the area, annual herb 10–60 (90) cm tall, corolla dull burgundy-red, robust specimens may look similar to *Scrophularia californica* though differing in their inflorescence structure and annual habit, 24 March 1993, *T. Ross & S. Boyd 6819* (RSA).

Previous knowledge. This species is not recorded for the North American flora in Kartesz (1994) and, to the best of our knowledge, has not been previously reported in any Californian or North American floras.

Significance. First formal report of the species as naturalized in North America. This winter annual was originally cultivated by R. Shaw in his studies of the Scrophulariaceae at the Rancho Santa Ana Botanic Garden (Los Angeles Co.: Claremont, RSABG, grown in greenhouse, seed from Botanic Garden, Berlin, voucher sheet, *n* = 18, 22 April 1958, *R. J. Shaw 1105* [RSA]). The species probably escaped from cultivation here as early as the late 1950s, and has been a common weed on the garden grounds to this day. It often establishes itself in unirrigated areas, but particularly thrives amid garden plantings that receive some supplementary watering. The taxon occurs both on the clay soils of Indian Hill Mesa and on the adjacent, coarser granitic alluvial soils to the N and E of the mesa. It has also been noted amid native scrub vegetation on these alluvial soils in the Bernard Field Station immediately E of the garden grounds (Ross, personal observation 1991). Fortunately, both the garden and the field station are surrounded by suburban development and, to date, the species has not been documented outside of this general area in NE Claremont. It is native to the Mediterranean region and Portugal, and apparently is a weedy species by nature, as I. B. K. Richardson (*Scrophularia*, pp. 216–220 in Tutin et al. [eds.], *Flora Europaea* Vol. 3, 1972) cites the native habitat as "scrub, cultivated ground and waste places."

—TIMOTHY S. ROSS and STEVE BOYD, Herbarium, Rancho Santa Ana Botanic Garden, 1500 N. College Avenue, Claremont, CA 91711.

MONTANA

ASCLEPIAS OVALIFOLIA Dene. (Asclepiadaceae).—Carter Co., Long Pine Hills of Custer National Forest, 40 km se. of Ekalaka below Icebox Spring, T2S R61E S33,

locally common in partially burned valley opening among ponderosa pine, 1145 m, 2 July 1994, *K. H. Dueholm and B. Heidel 12217* (MONT, MONTU).

Significance. First record for MT, a range extension of 80 km n. from Crook Co., WY.

CAREX LUZULINA Olney var. *ATROPURPUREA* Dorn (Cyperaceae).—Beaverhead Co., se. shore of Waukena Lake, 2745 m, 1 August 1945, *C. L. Hitchcock and C. V. Muhlick 13042* (MONT, MONTU, RM); Deerlodge Co., wet meadow south above Storm Lake near trail, 2516 m, 13 August 1972, *K. H. Lackschewitz 3921* (MONTU), characteristic for all parts of the meadow around Warren Lake, 2582 m, 24 August 1974, *K. H. Lackschewitz 5690* (MONTU); Missoula Co., Carlton Reservoir, 21 August 1959, *C. H. MacDonald s.n.* (MONTU); Wind Lakes near Friday Pass, little lake to n., 2135 m, 20 August 1923, *J. E. Kirkwood and J. W. Severy 1657* (MONT); Ravalli Co., meadow of Lake Jerusalem, 219 m, 11 August 1968, *K. H. Lackschewitz and T. Fageraas 658* (MONTU); On moist, mossy banks of Lower Little Duffy Lake, 2226 m, 23 August 1968, *K. H. Lackschewitz and T. Fageraas 876* (MONTU); Wet pond meadow, (500') above Carlton Lake, Lolo Peak, 2532 m, 8 September 1968, *K. H. Lackschewitz and T. Fageraas 1045* (MONTU); meadow below Watchtower Trail Pass on Bitterroot-Selway Divide, 2379 m, 27 July 1969, *K. H. Lackschewitz and T. Fageraas 1538* (MONTU); Watchtower Peak, 27 July 1969, *K. H. Lackschewitz and T. Fageraas 1602* (MONTU, RM); moist run on bedrock July 1969, *K. H. Lackschewitz and T. Fageraas 1538* (MONTU); Watchtower Peak, 27 July 1969, *K. H. Lackschewitz and T. Fageraas 1602* (MONTU, RM); moist run on bedrock, July 1969, *K. H. Lackschewitz and T. Fageraas 1538* (MONTU); Watchtower Peak, no elev., 27 July 1969, *K. H. Lackschewitz and T. Fageraas 1602* (MONTU, RM); moist run on bedrock 31 July 1969, *K. H. Lackschewitz and T. Fageraas 1640* (MONTU); above Blodgett Lake, moist meadow on steep e. slope, Bitterroot-Selway Divide, 2363 m, no date, *K. H. Lackschewitz and T. Fageraas 1818* (MONTU); cirque below banks of "Crater Lake", 2225 m, 23 August 1969, *K. H. Lackschewitz 1856* (MONTU); above cirque lake, Ranger Peak, 2348–2379 m, 23 August 1969, *K. H. Lackschewitz and T. Fageraas 1857* (MONTU); Ranger Peak divide on moist terrace meadow of e. slope, 2410 m, 23 August 1969, *K. H. Lackschewitz and T. Fageraas 1925* (MONTU, RM); Chaffin Creek headwaters, 31 August 1969, *K. H. Lackschewitz and T. Fageraas 2056* (MONTU, RM); wet meadow above inlet of Nelson Lake, ¼ mile upstream along inlet, 2285 m, 2 August 1971, *K. H. Lackschewitz 3151* (MONTU); Trapper Peak, Bitterroot National Forest, T2N R22W S35 E ½ with *Larix lyallii* in wet meadows, 30 July 1968, *S. F. Arno 131* (MONTU); Chaffin Lakes Basin, e. slope in late snowpack meadow with meltwater ponds below showdrift, 2650 m, 30 Aug. 1971, *K. H. Lackschewitz 3395* (MONTU) (specimens annotated to variety by W. Fertig, Wyoming Natural Diversity Database).

Significance. This variety circumscription by Dorn (Flora of Wyoming, 1988) has not previously been applied to MT material, a range extension of over 465 km nw. from Sublette Co., WY.

CELTIS OCCIDENTALIS L. (Ulmaceae).—Big Horn Co., Chief Plenty Coups State Park, ca. 0.8 km w. of Pryor, T5S R26E S6, coulee arm off Pryor Creek at rimrock base lined with shrubs, 1250 m, 1 July 1994, *B. Heidel 1264* (MONT, MONTU, RM).

Significance. First record for MT apart from plantings, from a site historically used by Crow Indians. It is a range extension of 45 km n. from Big Horn and Sheridan cos., WY, where it is considered escaped from homestead plantings (R. L. Hartman, RM, pers. commun.), and 360 km nw. from native stations in Goshen Co., WY.

DICHANTHELIUM WILCOXIANUM (Vasey) Freckmann (Poaceae).—Custer Co., Fort Keogh Experiment Station, 8 km w. of Miles City, T7N R46E S2, 810 m, 20 July

1977, *J. Romo s.n.* (LARRL); Carter Co., Long Pines of Custer National Forest, opposite Little Noise Spring across Speelman Creek Rd., T2S R61E Sec. 28, 1105 m, 12 June 1994, *K. H. Dueholm 12194* (MONT, MONTU); Ekalaka Hills of Custer National Forest, ca. 2 km s. of McNab campground, T1N R59E S29, 1110 m, 14 June 1994, *K. H. Dueholm 12199* (MONTU)(*Romo s.n.* verified by J. H. Rumely, MONT).

Significance. First records for MT, a range extension of over 75 km w. from Perkins Co., SD and over 75 km n. from Crook Co., WY.

ELATINE BRACHYSPERMA Gray (Elatinaceae).—Gallatin Co., s. shore of Hebgen Lake, very wet mud, 2042 m, 30 October 1933, *J. C. Whitman 1433* (RM); Missoula Co., Missoula Valley, Frenchtown Pond, T15N R21W S33, rare under 25–30 cm of water, 914 m, T15N R21W S33, rare under 25–30 cm of water, 914 m, 26 September 1990, *W. E. Albert 877* (MRC)(*Whitman 1433* annotated by R. L. Hartman, RM, *Albert 877* verified by P. F. Stickney, MRC).

Significance. First record for MT, a range extension of 300 km w. from Johnson Co., WY.

EUSTOMA GRANDIFLORUM (Raf.) Shinnery (Gentianaceae).—McCone Co., private ranch w. of Circle in wet meadow, August 1994, McCone County Extension Service s.n. (MONT) (determined by J. H. Rumely, MONT).

Significance. First record for MT, a range extension of over 400 km n. from Natrona Co., WY.

EVAX PROLIFERA Nutt. ex DC. (Asteraceae).—Custer Co., U.S. Range Livestock Experiment Station, Pasture F, 12 July 1935, *L. Ellison 3247* (MRC, RM); Powder River Co., Custer National Forest app. 17 km. e. of Ashland, T3S R46E S16, base of small butte in rolling sagebrush grasslands, 1183 m, 27 June 1995, *H. Marriott 11570* (MONT)(*Ellison 3247* determined by Bureau of Plant Industry, augmented label by P. F. Stickney, MRC; *Marriott 11570* verified by R. L. Hartman, RM).

Significance. First record for MT, a range extension of over 220 km nw. from Pennington Co., SD.

GYMNOTERIS PARVULA Heller (Polemoniaceae).—Gallatin Co., near West Yellowstone on open mesa in Madison Basin, along highway among grasses on obsidian sand, 18 June 1932, 2040 m, *J. C. Whitham 1389* (MRC, MONT) (verified by J. H. Rumely, MONT; annotated and augmented label by P. F. Stickney, MRC).

Significance. First record for MT, a range extension of app. 55 km w. from Yellowstone National Park, WY.

IPOMOPSIS CONGESTA (Hook.) Grant var. *PSEUDOTYPICA* (Const. and Rollins) Day (Polemoniaceae).—Custer Co., near head of Sweeney Cr., edge of canyon under pine on sandy upland loam, 974 m, 17 May 1936, *L. Ellison 3292* (MRC, RM); T13N R47E S28, scattered distribution and fair abundance on gumbo soil on 15% slope, ne. aspect, 1067 m, 6 June 1924, *J. N. Templer 76* (RM); Powder River Co., Ft. Howes Work Center on Custer National Forest, T6S R45E S24, lower sparsely-vegetated slopes on rocky soil, 1036 m, 23 May 1995, *H. Marriott 11496* (MONT); 7.2 km s. of Camps Pass in Custer National Forest, T4S R47E S2, barren silty outcrop, 1225 m, 8 July 1995, *B. Heidel and S. Kimball 1371* (MONT)(*Ellison 3292*, *Templer 76*, *Heidel and Kimball 1371* annotated to variety by H. Marriott).

Significance. First records for MT of this variety, a range extension of 65 km n. from Campbell and Crook cos., WY.

IPOMOPSIS MINUTIFLORA V. Grant (Polemoniaceae).—Ravalli Co., Bitterroot Valley on Willoughby Cr., T8N R20W S13, steep bluff among sagebrush in loamy-clay derived from volcanic ash and in overlying alluvial sandy gravel layer, 1110 m, 20 June 1993, *J. A. Hoy 125* (MRC), *J. A. Hoy 135* (MONTU) (verified by P. F. Stickney, MRC).

Significance. First report for MT; a range extension of app. 320 km se. from Spokane Co., WA, and over 350 km n. from Bingham Co., ID.

ORYZOPSIS CONTRACTA (Johnson) Shechter (Poaceae).—Sheep Creek Ranger Stn., gravel wash in Beaverhead National Forest, 2135 m, 15 July 1921, *C. W. Griffin D6-123* (MRC, RM); Beaverhead Co., 3 km. n. of Clark Canyon Reservoir, T9S R11W S35, lower slopes of limestone ridges, 1829 m, 15 June 1995, *B. Heidel 1348* (MONTU); mouth of Grasshopper Creek, T8S R10W S36, steep gravelly sagebrush slope, 1646 m, 16 June 1995, *B. Heidel 1353* (MONTU); Bannack State Park, T8N R12W S1, exposed gravelly grassland slope, 1780 m, 21 July 1995, *B. Heidel 1405* (MONTU) (*Griffin D6-123* annotated by W. Fertig, Wyoming Natural Diversity Database, and location determined as Beaverhead Co., Tendency Mts., T13S R10W S36 by P. F. Stickney, MRC).

Significance. First records for MT, a range extension of app. 200 km nw. from Teton County, WY.

OXALIS STRICTA L. (Oxalidaceae).—Carter Co., Long Pine Hills of Custer National Forest, 16 km se. of Ekalaka, T2S R60E S33, occasional on dry benches in open ponderosa pine, 1150 m, 2 July 1994, *B. Heidel and K. H. Dueholm 1261* (MONTU).

Significance. Previously collected from Carter, Custer, Fallon and Toole cos., MT by Civilian Conservation Corps collectors in 1936 and 1937 as recorded in the INVADERS database (MONTU), though not published as part of the state flora. Label information and repository of the CCC collections are unknown. It is variously described as native and exotic, called a cosmopolitan weed by the Great Plains Flora Association (Flora of the Great Plains, 1986), and a species presumed to be native in much of North America by Hitchcock et al. (Flora of the Pacific Northwest, 1984).

PENSTEMON GLOBOSUS (Piper) Pennell & Keck (Scrophulariaceae).—Beaverhead Co., Trail Cr. meadows, T1S R18W S30, 14 July 1968, *D. V. Clark 162* (MONTU), 26 June 1969, *D. v. Clark 276* (MONTU); Pioneer Range, Mono Creek Park, R4S R12W S5, 20 July 1968, *D. V. Clark 170* (MONTU), 15 July 1970, *D. V. Clark 550, 552, 555, 556, 561, 564, 565, 571* (MONTU); Trail Cr. meadows, T2S R18W S5, no date, *D. V. Clark 572* (MONTU); Trail Cr. meadows, T2S R18W S4, 15 July 1970, *D. V. Clark 575* (MONTU); Trail Cr. meadows, T2S R18W S15, 15 July 1970, *D. V. Clark 578* (MONTU); 16 July 1970, *D. V. Clark 590* (MONTU); Trail Cr. 6.8 km e. of Gibbons Pass, T1S R18W S32, wet mountain meadow, 2059 m, 2 July 1960, *P. F. Stickney 387* (MONT, MRC); s. of Big Hole Natl. Battlefield entrance, T2S R17W S25, 1 July 1970, *D. V. Clark 508* (MONTU); Big Hole Battlefield, T2S R17W S24, 4 July 1980, *J. Pierce 797* (MONTU); May Creek Campground, T2S R18W S13, 15 July 1970, *D. V. Clark 582* (MONTU); below Chief Joseph Pass, T2S R18W S8, 15 July 1985, *P. Lesica 3388* (MONTU); Granite Co., Anaconda-Pintlar Range, Maloney Basin, T3N R15W S14, 20 July 1979, *K. H. Lackschewitz 9048* (MONTU); Anaconda-Pintlar Range, meadow setting, T3N R17W S11, 23 July 1993, *K. H. Lackschewitz and I. Lackschewitz 11999* (MONTU); Jefferson Co., ca. 45 km ne. (sic) of Butte along Hwy 91, 14 June 1936, *V. L. Marsh 96* (MONTU) (*Clark 170* verified by N. H. Holmgren in 1982, *Marsh 96* annotated to *P. globosus* by D. V. Clark; *Lesica 3388* annotated by K. H. Lackschewitz, MONTU).

Significance. Collected in sw. MT for doctoral research by D. V. Clark (1971) but

not recognized in floras. First records for MT, a range extension of app. 50 km n. from Custer Co., ID.

PENSTEMON GRANDIFLORUS Nutt. (Scrophulariaceae).—Custer Co., Fort Keogh Experiment Station, ca. 6.4 km w. of Miles City, T7N R46E S11 and S12, on sandy knob above Yellowstone River, 725 m, *J. Romo s.n.* (LARRL).

Significance. First record for MT, a range extension of over 150 km nw. from Butte Co., SD and 160 km n. from Crook Co., WY.

PHYSARIA BRASSICOIDES Rydb. (Brassicaceae).—Carter Co., Ekalaka Hills of Custer National Forest, ca. 2 km se. of Ekalaka, T1N R58E S2, occasional on small, steep sandstone outcrop, 1120 m, 11 June 1994, *K. H. Dueholm 12197* (MONTU).

Significance. First record for MT; a range extension of app. 100 km n. from Crook Co., WY.

PHYSARIA DIDYMOCARPA (Hook.) A. Gray var. *LANATA* A. Nels. (Brassicaceae).—Big Horn County, ca. 12.9 km nnw. of Decker, T8S R39E S14 and S22, locally abundant on steep scoria and sometimes shale slopes, 1160–1250 m, May 1993 [flowering], August 1993 [fruiting], *R. Prodgers s.n.* (MONT)(verified J. H. Rumely, MONT).

Significance. First record for MT; a range extension of less than 10 km n. from Sheridan Co., WY.

SPERGULARIA MEDIA (L.) Presl (Caryophyllaceae).—Beaverhead Co., Dillon, roadside alkaline area, 14 July 1958, *W. E. Booth 58200* (MONT); Madison Co., Twin Bridges, abundant in roadside alkaline area, 14 July 1958, *W. E. Booth 58208* (MONT); Jefferson Co., 3 km sw. of Whitehall, T1N R4W, alkaline flats of the Jefferson River valley, 1325 m., 3 August 1994, *B. Heidel 1246* (MONT, MONTU, RM, E) (*Heidel 1246* determined by J. Ratter, E; *Booth 58200* and *58208* annotated by B. Heidel, Montana Natural Heritage Program).

Significance. First record of this European species in MT, a range extension of over 590 km n. from Platte Co., WY.

SPIRANTHES DILUVIALIS Sheviak (Orchidaceae).—Jefferson Co., 3 km sw. of Whitehall in the Jefferson River valley, T1N R4W, wet meadow borders along small meander scar, 1326 m., 3 August 1994, *B. Heidel 1245* (MONTU, MONT, NYS) (determined by C. Sheviak, NYS; 2n=74).

Significance. First record for MT; a range extension of over 550 km nw. from Converse and Goshen cos., WY.

STELLARIA JAMESIANA Torrey (Caryophyllaceae).—Beaverhead Co., Centennial Mts., Odell Creek., T15S R2W S12, open conifer on 10% slope, ne. exposure, 2316 m, 17 July 1959, *D. Nelson s.n.* (RM); Centennial Mountains, ca. 16 km e. of Monida and 1.6 km s. on Price Peet Rd. near Price Cr., T14S R4W S31, 2165 m, 26 July 1993, *D. Culver 637* (MONT); Centennial Mts., Odell Creek, T14S R1W S31, 2135 m, 8 August 1993, *D. Culver 781* (MONT); (*Nelson s.n.* determined by Jane Roller; *Culver 637* and *781* determined by J. H. Rumely, MONT).

Significance. First records for MT; a range extension of app. 50 km nw. from Fremont Co., ID.

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